REMARKS

In response to the Office Action mailed April 20, 2009, the new Assignee (Nuance Communications, Inc.) respectfully requests reconsideration. Claims 19, 20, 22-25, 27 and 28 were previously pending in this application. By this amendment, claims 19 and 24 have been amended to correct a minor typographical error. No claims have been added or canceled. As a result, claims 19, 20, 22-25, 27 and 28 remain pending for examination, with claims 19 and 24 being independent.

I. Amendments to Claims 19 and 24

Claims 19 and 24 have been amended to correct a minor typographical error ("at lease" has been changed to "at least"). The amendments do not raise any new issues. Accordingly, entry of the amendment is respectfully requested.

II. Rejections Under 35 U.S.C. §103

The Office Action rejects claims 19-20, 22-25 and 27-28 (including independent claims 19 and 24) under 35 U.S.C. 103(a) as allegedly being obvious over U.S. Pat. 6,421,672 (McAllister et al.) in view of U.S. Pat. 6,256,630 (Gilai et al.). These rejections are respectfully traversed.

The Assignee does not accede to the propriety of the combination of McAllister and Gilai. However, the Assignee has not addressed the propriety of the combination because even if the cited combination were proper, the combination fails to disclose or suggest all of the features recited in each of the independent claims, as discussed below in connection with each of claims 19 and 24.

a. Overview of Embodiments

Speech-based interfaces may allow a search for a particular database record based on spoken data provided by a user (e.g., a search for a database record for a particular person based upon the person's name) (¶ 0004). When such a search results in the identification of multiple matching data records (e.g., if multiple people identified in a database share the same name), difficulties can arise in effectively presenting the results to the user. For example, when numerous data items from the data records are audibly presented, it can be difficult for the user to remember the data items when

making a selection of a data record (¶ 0004). In addition, some of the data items in the data records may be unpronounceable by the speech interface (¶ 0004).

The specification evidences an appreciation that various techniques can be used to analyze database search results to determine a data field that may be used to uniquely and effectively identify a search result when the data from that field of the matching data records is presented to a user (¶ 0007). Such techniques include: (1) determining whether data items of a data field can be pronounced by the speech interface, (2) determining whether a data field uniquely identifies each search result (i.e., does not contain duplicate data items), and (3) determining the lengths of data items and/or the average length of the data items within a particular data field (¶ 0023). Data fields may be excluded from being used to identify a search result based on the above.

For example, with reference to FIG. 1, reproduced below, the "Phone" and "Dept. Number" data fields may be excluded because one or more of the data items therein cannot be pronounced by the speech interface (¶ 0018). In addition, the "Formal Name" data field may be excluded because entries 3, 7 and 8 include duplicate data items in this data field (¶ 0017). Further, the "Dept. Name" data field may be excluded because the data items therein are too long (¶ 0019).

Entry	Name	Formal Name	Phone	Location	Job Description	Dept. Number	Dept. Name
1	Joe Smith	Joseph B. Smith	7-777999	United Kingdom	Programmer	AXPN	Netfinity Service and Support
2	Joe Smith	Joseph P. Smith	777-7777	Las Vegas	Global Services	55TU	Las Vegas Large/Mid Range
3	Joe Smith	Joseph R. Smith	987-6543	West Palm Beach	Human Factors	AMXI	Speech SOL Test and Technology Support
4	Joe Smith	Joe Smith	7-123456	Hursley	Contractor	111123	Systems Support
5	Joe Smith	Joe Smith	000-0000	Chicago	Technician	ONDI	Starwood
6	Joe Smith	Joe Smith	456-7890	Poughkeepsie	Business Planner	AB9Z	TMF Application Data Transfer Service Development
7	Joe Smith	Joseph R. Smith	123-4567	Austin	Engineer	QPR2	VTS Coupled Systems
8	Joe Smith	Joseph R. Smith	999-9999	Tucson	Global Services	6CQV	Customer Service Data Management
Analysis	Failed Duplicate	Failed Duplicate	Failed Cannot Pronounce	9.5 Characters 2.875 Syllables	12.125 Characters 3.75 Syllables	Failed Cannot Pronounce	Failed Items Too Long

Figure 1

With reference again to FIG. 1, after excluding certain data fields based on the above criteria, the "Location" and "Job Description" fields remain. One such data field may be selected, such as the "Location" data field, which includes data items having the smallest average length (¶ [0024]). The search results may then be presented to the user by playing each data item corresponding to the selected data field through the speech interface (¶ [0024]). For example, the speech interface may state: "Found eight matches for this name, Please choose a location: United Kingdom, Las Vegas, West Palm Beach, Hursley, Chicago, Poughkeepsie, Austin, or Tucson" (¶ [0024]).

The foregoing summary is provided to assist the Examiner in appreciating some aspects and/or applications of embodiments described in the present application. However, this summary may not apply to each of the independent claims, and the language of the independent claims may differ in material respects from the summary provided above. Thus, the Assignee respectfully requests that careful consideration be given to the language of each of the independent claims and that each be addressed on its own merits, without relying on the summary provided above. In this respect, the Assignee does not rely on the summary provided above to distinguish any of the claims over the prior art. Rather, the Assignee relies only upon the arguments provided below.

b. Independent Claim 19

As explained below, independent claim 19 recites several features not taught or suggested by the combination of McAllister and Gilai.

First, independent claim 19 recites "processing the common data fields of said retrieved database entries according to predetermined disambiguation criteria including... excluding any data field having at least one data item that is unpronounceable," which is not taught or suggested by the combination of McAllister and Gilai.

The Office Action alleges that this feature is taught by McAllister, stating (at page 3, lines 10-13 of the Office Action):

> McAllister teaches pronunciation rules for generating speech (col. 5, lines 14-24 and col. 7, lines 57-63). Therefore, data items that do not fit the pronunciation rules will not be generated as speech and pronounced. Therefore, McAllister teaches eliminating [an] unpronounceable data item.

The Examiner appears to have misunderstood the nature of the pronunciation rules described in the cited passages (i.e., col. 5, lines 14-24 and col. 7, lines 57-63). The pronunciation rules are used by a speech generator to generate a speech signal. Contrary to the assertion in the Office Action, the cited passages do not teach or suggest "data items that do not fit the pronunciation rules will not be generated as speech and pronounced." The concept of data items "fitting" the pronunciation rules does not make sense in the context of Galai, as the pronunciation rules simply dictate how particular speech data is generated. *Not* generating speech based on the pronunciation rules is neither taught nor suggested by McAllister. The pronunciation rules are used to generate speech, and for any exclusionary purpose.

In addition, the Office Action only alleges that McAllister teaches eliminating an unpronounceable *data item*, not "excluding any *data field* having at least one data item that is unpronounceable," as recited in claim 19. The cited passages of McAllister make no mention of data fields. Further, having a data item that is unpronounceable (which, again, is not taught or suggested by the cited passages) in no way implies excluding a *data field* including the data item.

In view of the foregoing, the combination of McAllister and Gilai does not teach or suggest "processing the common data fields of said retrieved database entries according to predetermined disambiguation criteria including... excluding any data field having at least one data item that is unpronounceable," as recited in claim 19. For at least this reason, the rejection of claim 19 is improper and should be withdrawn.

Second, independent claim 19 recites "processing the common data fields of said retrieved database entries according to predetermined disambiguation criteria including... excluding any data field having at least one data item that exceeds a predetermined maximum length," which is not taught or suggested by the combination of McAllister and Gilai.

The Office Action concedes that McAllister does not teach this feature, but alleges that this feature is taught by Gilai, stating (at page 7, lines 3-8 of the Office Action):

> McAllister does not explicitly teach excluding data fields having data items that exceed a predetermined maximum length.
>
> However, this feature is well known in the art as evidenced by Gilai et al. which disclose a database accessing system and method comprising the step of excluding data fields having data items that exceed a predetermined length (col. 12, lines 13-46, wherein the database accessing

> system of Gilai enters, onto a list, only strings with a predetermined length entered by the user, and obviously ignores the rest. Furthermore, it discards strings with lowest probability which corresponds to strings with higher length).

The Assignee traverses the assertion that the feature is well known. The cited passage (i.e., col. 12, lines 13-46 of Galai) relates to processing a "numeric string ... keypad input to spellguess unit 30" (see col. 12, lines 17-18). In particular, the passage describes how a spellguess unit 30 (FIG. 2) assigns probabilities to possible strings (e.g., BUSH, BURG or BURI) represented by a numeric string (e.g., 2874) inputted by a user via a telephone keypad (see col. 12, lines 17-25 and col. 6, lines 58-63 of Galai).

The cited passage does not relate to "processing the common data fields of said retrieved database entries," as recited in claim 19. In particular, the numeric string is not described as being retrieved from a database entry. Further, the numeric string is not described as belonging to a "common data field" in the context of claim 19 "wherein said retrieved database entries include a plurality of common data fields." Gilai is completely silent in this respect.

Further, the cited passage does not teach or suggest "excluding any data field having at least one data item that exceeds a predetermined maximum length," as recited in claim 19. Even if one applies the reasoning of the Examiner that the "system of Gilai enters, onto a list, only strings with a predetermined length entered by the user, and obviously ignores the rest," then there are no data items exceeding a predetermined maximum length because such strings are never generated. Thus, there can be no data field "having at least one data item that exceeds a predetermined maximum length" to exclude.

In view of the foregoing, the combination of McAllister and Gilai does not teach or suggest "processing the common data fields of said retrieved database entries according to predetermined disambiguation criteria including... excluding any data field having at least one data item that exceeds a predetermined maximum length," as recited in claim 19. For this additional reason, the rejection of claim 19 is improper and should be withdrawn.

c. Independent Claim 24

As explained below, independent claim 24 recites several features not taught or suggested by the combination of McAllister and Gilai.

For reasons that may be appreciated from the discussion provided in connection with claim 19, the combination of McAllister and Gilai does not teach or suggest a computer-implemented method of disambiguating database search results within a speech interface, the method comprising, *inter alia* (1) "processing the common data fields of said retrieved database entries according to predetermined disambiguation criteria including... excluding any data field having at least one data item that exceeds a predetermined maximum length," or (2) "processing the common data fields of said retrieved database entries according to predetermined disambiguation criteria including... excluding any data field having at least one data item that exceeds a predetermined maximum length," as recited in claim 24. For at least these reasons, the rejection of claim 24 is improper and should be withdrawn.

d. Dependent Claims

Since each of the dependent claims depends from a base claim that is believed to be in condition for allowance (as discussed above), the Assignee believes that it is unnecessary at this time to argue the allowability of each of the dependent claims individually. However, the Assignee does not necessarily concur that the basis for the rejections of any of the dependent claims is proper. Therefore, the Assignee reserves the right to specifically address the patentability of the dependent claims in the future, if deemed necessary.

CONCLUSION

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Assignee's representative at the telephone number indicated below to discuss any outstanding issues relating to the allowability of the application.

The Assignee believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 23/2825 under Docket No. N0484.70551US00 from which the undersigned is authorized to draw.

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Respectfully submitted,
Nuance Communications, Inc.

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